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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/893,692

06/29/2001

David Bill

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Multimedia

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26171 7590 12/23/2004

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EXAMINER

WINDER, PATRICE L

ART UNIT

PAPER NUMBER

2145

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,692

Applicant(s)

BILL ET AL.

Examiner

Patrice Winder

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3-29-02</u> +. | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on March 29, 2002; May 17, 2002; August 12, 2002; May 29, 2003; June 10, 2003; October 02, 2003; September 24, 2004 was filed before the first office action on the merits. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-13, 17-27, 31, 34-42, 45-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Boivie et al., USPN 6,625,773 B1 (hereafter referred to as Boivie).

4. Regarding claim 1, 36, Boivie taught a method of transmitting packets (abstract), the method comprising:

using a switch to receive a stream of data units including a payload portion and an attribute portion (column 3, lines 33-41);

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using a switch to duplicate at least the payload portion of a data unit within the stream of data units (column 4, lines 17-24); and

using a switch to enable access to duplicated payload portion of the data unit by two or more terminals (column 4, lines 30-40).

5. Regarding claim 17, 51, Boivie taught a switch (column 3, lines 20-24, column 7, lines 29-38, 56-60) comprising:

a first communications interface that is structured and arranged to receive a stream of one or more data units that each include a payload portion and an attribute portion (column 3, lines 33-41);

a buffer structured and arranged to store at least the payload portions of data units included in the received stream (column 4, lines 17-31);

a replicator structure and arranged to duplicate at least the payload portions of one or more data units (column 4, lines 17-31); and

a second communications interface structured and arranged to enable access by two or more terminals to the payload portions that are duplicated by replicator (column 4, lines 36-40).

6. Regarding claim 45, Boivie taught a method of distributing data units to terminals (column 3, lines 20-27), the method comprising:

interfacing with a network including one or more switches capable of duplicating at least a payload portion of a data unit within a stream of data units including at least an attribute portion and the payload portion (column 4, lines 2-7, 17-25; column 7, lines 30-37); and

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transmitting the stream of data units to the switches for duplication of at least the payload portion of the data unit within the stream for transmission to two or more terminals (column 4, lines 2-7, 17-25).

7. Regarding claim 52, Boivie taught a system (abstract) comprising:
a source system structured and arranged to enable access to a stream of data units (column 3, lines 33-41);

a switch structured and arranged to receive a stream of data units from a source system, to duplicate at least a payload portion of the data units in the stream, and to transmit payload portions duplicated to two or more terminals (column 4, lines 17-25);
and

one or more terminals structured and arranged to receive a stream of data units that have been duplicated by the switch (column 4, lines 30-40).

8. Regarding dependent claim 2, 18, Boivie taught the method of claim 1, wherein the data unit includes an Internet Protocol packet (column 1, lines 23-31).

9. Regarding dependent claim 3, 38, 49, Boivie taught the method of claim 2, wherein the attribute portion of the data unit includes an Internet Protocol header (column 1, lines 23-31).

10. Regarding dependent claim 4, 19, 39, 50, Boivie taught the method of claim 1, wherein the attribute portion of the data unit specifies one or more pieces of layer three information (column 4, lines 2-16).

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11. Regarding dependent claim 5, 20, Boivie taught the method of claim 1, further comprising using the switch to generate and associate different attribute portions with duplicates of the payload portion generated by the switch (column 4, lines 24-31).

12. Regarding dependent claim 6, Boivie taught the method of claim 1, wherein using the switch to duplicate at least the payload portion includes duplicating only the payload portion of the data unit (column 4, lines 24-31).

13. Regarding dependent claim 7, 21, Boivie taught the method of claim 5, wherein using the switch to associate different attribute portions with the data unit and duplicates of the payload portion includes specifying destination information that differs among the duplicates of the payload portion (column 4, lines 36-46).

14. Regarding dependent claim 8, 24, Boivie taught the method of claim 1, wherein using to switch to duplicate includes using the switch to duplicate the payload portion and the attribute portion (column 4, lines 41-46, column 7, lines 18-27).

15. Regarding dependent claim 9, 22, Boivie taught the method of claim 5, wherein using the switch to generate and associate different attribute portions includes changing an IP destination address (column 4, lines 5-15, 36-46).

16. Regarding dependent claim 10, 23, Boivie taught the method of claim 9, wherein changing the IP destination address includes changing the IP destination address to an IP address corresponding to one or more terminals to which access to the payload portion will be enabled (column 4, lines 36-46).

17. Regarding dependent claim 11, 25, 40, 46, Boivie taught the method of claim 1, wherein using the data unit includes audio content (voice data, column 1, lines 41-57).

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18. Regarding dependent claim 12, 26, 41, 47, Boivie taught the method of claim 1, wherein the data unit includes video content (video data, column 1, lines 41-57).

19. Regarding dependent claim 13, 27, 42, 48, Boivie taught the method of claim 1, wherein the data unit includes streamed media (voice-data-video conference, column 1, lines 41-57).

20. Regarding dependent claim 31, Boivie taught the switch of claim 17, wherein the second communications interface transmits the duplicated stream of data units to two different terminals (column 4, lines 26-31, column 7, lines 29-37).

21. Regarding dependent claim 35, Boivie taught the switch of claim 17, wherein the replicator is structured and arranged to duplicate only the payload portion of the data unit (column 4, lines 17-25).

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claims 14-16, 28-30, 32-34 and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boivie in view of Bommaiah et al., USPN 6,708,213 B1 (hereafter referred to as Bommaiah).

24. Regarding dependent claim 14, 28, 43, Boivie does not specifically teach receiving a request to receive the stream of data units. However, Bommaiah taught

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receiving a request to receive the stream of data units from at least a requesting one of the two or more terminals (column 6, lines 38-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made that incorporating Bommaiah's streaming data in response to a client request in Boivie's system for duplicating packets would have reduced network congestion. The motivation would have been to reduce wasted bandwidth by only streaming data to clients upon request.

25. Regarding dependent claim 15, 29, 44, Bommaiah taught enabling access to the at least one requesting terminal in response to request (column 6, lines 44-54).

26. Regarding dependent claim 16, 30, Bommaiah taught the request is received from a device other than terminals (column 6, lines 42-44).

27. Regarding dependent claim 32, Boivie does not specifically teach the two different terminals receive the stream of data units at two different temporal offsets. However, Bommaiah taught two different terminals receive the stream of data units at two different temporal offsets (column 6, lines 59-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made that incorporating Bommaiah's system for supporting subsequent requests for streaming data in Boivie's system for duplicating packets would have improved network performance. The motivation would have been to better utilize network resources by serving subsequent requests for the same network locations.

28. Regarding dependent claim 33, Boivie does not specifically teach the replicator includes more than one pointer to contents of the buffer to enable a first terminal to receive the stream of data units at a different point in the stream of data units than a

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second terminal. However, Bommaiah taught replicator includes more than one pointer to contents of the buffer to enable a first terminal to receive the stream of data units at a different point in the stream of data units than a second terminal (column 6, lines 48-64). For motivation for combination see claim 32, above.

29. Regarding dependent claim 34, Boivie does not specifically teach the buffer includes more than one instance of stream data units. However, Bommaiah taught the buffer includes more than one instance of the stream of data units (column 6, lines 52-58). For motivation for combination see claim 32, above.

Conclusion

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Rothschild et al., USPN 6,226,686 B1: taught a group messaging server that selects a message group, which lists all of the hosts that are targets of a message and forwards the message to that target group;
- b. Ooms et al., USPN 6,347,090 B1: taught forwarding a multicast packet from an ingress node via router to a plurality of destinations by duplicating the packet for each different next hop;
- c. Leighton et al., USPN 6,665,726 B1: taught replication process to provide fault tolerance for streaming a signal in a computer network; the original signal is sent to several splitters which make copies of the signal and sends the copies to concentrators;

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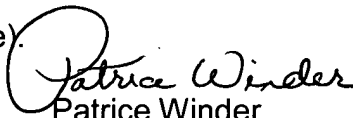
- d. Lipp et al., USPN 6,751,219 B1: taught a SONET frame can be divided into several multicast packets; each multicast packet enters the switch fabric through an ingress port and is then forwarded to a random node in the switch fabric where the multicast packet is replicated;
- e. Nail Kavak, WO 96/38961: taught a data packet, intended for transmission to a plurality of addresses, is copied at each node of the system to which one, or more subscribers, to which the packet is addressed, are connected; and
- f. Chater-Lee, GB 2 309849 A: a number of multiplexers units are connected via a circuit switch, when a multiplexer unit receives an information packet intended for at least two other destinations; the information packet is duplicated at the circuit switch and then provided to the other multiplexer units.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrice Winder whose telephone number is 703-272-3935. The examiner can normally be reached on Monday-Friday, 10:30 am-7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey can be reached on 703-272-3896. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Patrice Winder
Primary Examiner
Art Unit 2145

December 13, 2004